

Missouri Department of Natural Resources

## Total Maximum Daily Load Information Sheet

### North Fork Cuivre River

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#### Water Body Segment at a Glance:

<b>Counties:</b>	Pike/Lincoln
<b>Nearby Cities:</b>	Bowling Green
<b>Length of impaired segment:</b>	8 miles
<b>Pollutants:</b>	Low Dissolved Oxygen and Bacteria
<b>Source:</b>	None Given
<b>Water Body ID:</b>	0170



State Map Showing Location of Watershed

**Scheduled for TMDL development: 2016**

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#### Description of the Problem

##### Beneficial uses of North Fork Cuivre River

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life
- Protection of Human Health (Fish Consumption)
- Whole Body Contact Recreation – Category B

##### Uses that are impaired

- Protection of Warm Water Aquatic Life
- Whole Body Contact Recreation – Category B

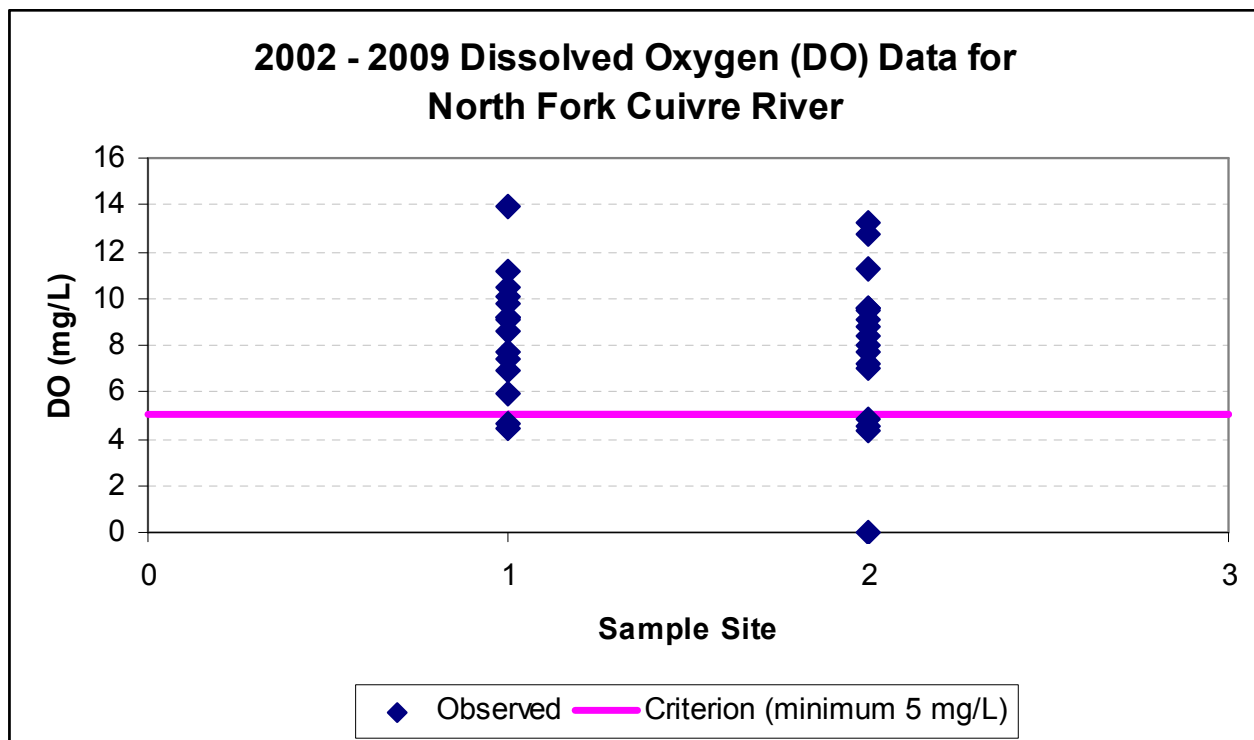
##### Standards that apply

- In the Missouri Water Quality Standards, or WQS, found in 10 CSR 20-7.031 Table A, the criterion for dissolved oxygen, or DO, in streams is a minimum of 5 mg/L (milligrams per liter or parts per million).
- The WQS 10 CSR 20-7.031(4)(C) state that the *E. coli* bacteria count shall not exceed 126 colonies per 100 milliliters of water (126 col/100 mL) for Category A and 206 col/100 mL for Category B waters. This count is the geometric mean during the recreational season (April 1-October 31) in waters designated for whole body contact recreation.

### Background Information and water quality data

The North Fork of the Cuivre River (pronounced qui' ver) flows southeast through Pike and Lincoln counties into the Mississippi River just north of St. Louis. The low dissolved oxygen impairment is based on data collected by the department from 2000 to 2004.

Water quality conditions in the North Fork Cuivre River are not protective of aquatic life. Dissolved oxygen is important as many aquatic organisms require high levels of oxygen to survive. For dissolved oxygen, if more that 10 percent of measurements in a water body fail to meet the water quality criterion that water body is judged to be impaired. In the case of the North Fork Cuivre River, five of 31 samples (16.1 percent) in Pike County did not meet the water quality criterion. In the graph below, it may not look like 31 samples because some data points were identical or so similar as to be hard to differentiate from each other. It is not known what is causing the dissolved oxygen to be low.

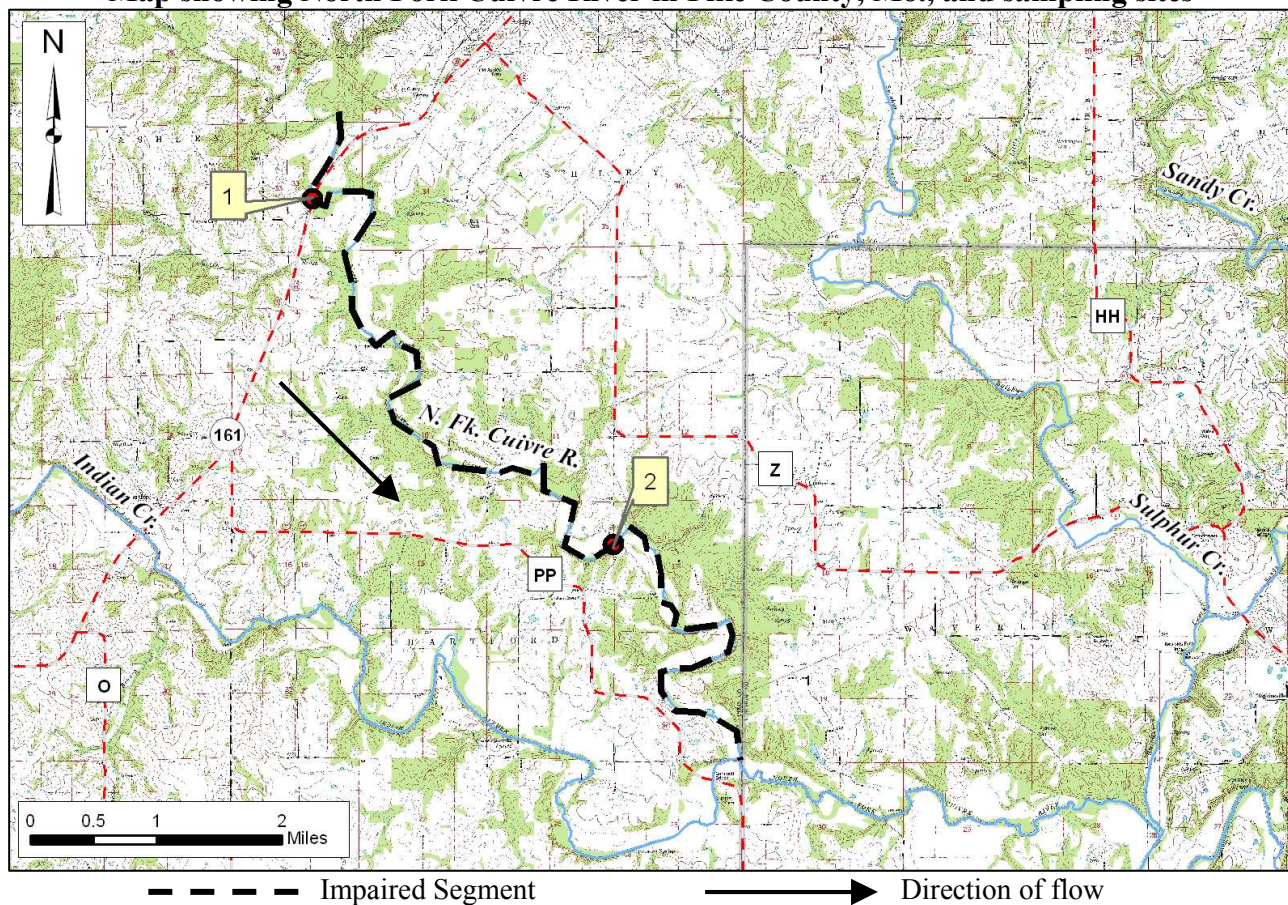


The North Fork Cuivre River is designated as Category B for the whole body contact recreation use, which means it has places deep enough for total immersion (i.e., swimming), but they may be on private lands or inaccessible to the public. The U.S. Geological Survey collected fecal coliform bacteria data in the North Fork Cuivre River in 2002 (see table on next page). The geometric mean of these data was 248 col/100mL. Since the department has no *E. coli* data, U.S. Environmental Protection Agency relied on the former approved criteria for Whole Body Contact Recreation – Category A of 200 col/ 100 mL for fecal coliform. Future monitoring on this river will include *E. coli*.

### Fecal Coliform Data for North Fork Cuivre River

Site	Site Name	Year	Mo	Day	FC
2	N. Fk. Cuivre R. @CR 325	2002	7	2	125
1	N. Fk. Cuivre R. @Hwy 161	2002	7	2	210
2	N. Fk. Cuivre R. @CR 325	2002	7	2	125
1	N. Fk. Cuivre R. @Hwy 161	2002	8	30	120
2	N. Fk. Cuivre R. @CR 325	2002	8	30	900
1	N. Fk. Cuivre R. @Hwy 161	2002	7	23	440
2	N. Fk. Cuivre R. @CR 325	2002	7	23	440
1	N. Fk. Cuivre R. @Hwy 161	2002	9	4	100
2	N. Fk. Cuivre R. @CR 325	2002	9	4	520
Geomean:					248

Map showing North Fork Cuivre River in Pike County, Mo., and sampling sites



#### Sample Sites

- 1 – North Fork Cuivre River at State Highway 161
- 2 – North Fork Cuivre River at County Road 325

#### For more information call or write:

Missouri Department of Natural Resources, Water Protection Program  
P.O. Box 176, Jefferson City, MO 65102-0176  
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Program Home Page: [www.dnr.mo.gov/env/wpp/index.html](http://www.dnr.mo.gov/env/wpp/index.html)